NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Permittee: Nevada Division of Wildlife

Permit: NV0020656

Project: Gallagher Fish Hatchery

General: The State of Nevada, Department of Conservation and Natural Resources, Division of Wildlife (NDOW) operates a fish hatchery approximately 65 miles southeast of Elko, Nevada at 40° 11' 04" N. latitude, 115° 29' 20" W. longitude, Township 27 N, Range 58 E, Section 31 MDB&M. The hatchery is situated on two separate parcels, the main hatchery complex and the north canopy area, leased from the U.S. Fish and Wildlife Service (USFWS) in the Ruby Lake National Wildlife Refuge. The facility has been used for 60 years as a hatchery. Permit NV0020656 was originally issued in February 1977. At Gallagher, NDOW produces trout for stocking in the streams of northern Nevada and produces eggs for the other hatcheries throughout the State. In recent years, production has averaged one hundred thousand pounds of fish and two million eggs annually.

The USFWS constructed an approximately seven-mile long collection ditch in the eastern Ruby Mountain alluvial fans to intercept spring flow for marsh water level management. All hatchery discharges are to the Ruby Marsh, a Class B water, via the collection ditch.

The main hatchery complex, the southern parcel, uses three artesian springs for water, South, approximately 65% of the inflow, North approximately 25% of the inflow and Nino, approximately 10% of the inflow. Recent combined spring flows have varied from 1,170 gallons per minute (gpm) to 2,700 gpm. The main hatchery complex includes fifty-six hatchery troughs, six circular tanks, twenty-four nursery ponds, fourteen lower rearing ponds, twenty upper rearing ponds and three brood ponds. The four outfalls discharge to the aerated oxbow/mixing pond. The collection ditch flows through this pond. Bressman Spring is located approximately three miles north of the main station and in the winter 2000/2001 has supplied 1,200 gpm for the four rearing ponds at the north canopy area. This area has one discharge outfall to the effluent treatment pond. This pond overflows to the collection ditch. The flow from all four springs is closely related to precipitation levels.

Receiving Water Characteristics: The Gallagher Fish Hatchery discharges to the Ruby Marsh via the collection ditch. The collection ditch intercepts several springs as well as the effluent treatment pond and flows through the oxbow/mixing pond. Collection ditch water has not been analyzed by the Permittee but the ditch flows to the Ruby Marsh, a Class B water. Per NAC 445A.125, beneficial uses of a Class B water include drinking water supply with treatment by disinfection and filtration only, irrigation, livestock watering, aquatic life and propagation of wildlife, recreation involving contact with the water, recreation not involving contact with the water, and industrial supply.

Description of the Location of the Discharge: The main hatchery complex discharges to the oxbow/mixing pond from four outfalls. Outfall 001, the flow-through, discharges downgradient of the water control box. Outfalls 002, 003 and 004 are the cleaning water pipes that discharge directly into the oxbow/mixing pond. The compliance point is located in the collection ditch approximately five meters downgradient of the oxbow/mixing pond.

The north canopy rearing ponds flow-through discharges to the effluent treatment pond via the tail race. The pond overflows to the USFWS constructed collection ditch at Outfall 005. This outfall is approximately three miles upgradient of the main hatchery complex.

Flow: The daily maximum flow from the five outfalls is 9.55 million gallons per day (MGD); the maximum 30-day average flow from these outfalls is not specified in the permit. The daily maximum flow from Outfall 001, the main hatchery complex flow-through water, is 5.90 MGD. The total daily maximum flow from Outfall 002, Outfall 003 and Outfall 004, the main hatchery complex cleaning water discharges, is 0.15 MGD. The daily maximum flow from Outfall 005, the north canopy area flow-through water, is 3.50 MGD. Due to the lack of depth, 1.5 feet deep, the north canopy rearing ponds are cleaned by the flow-through water.

Quantities: See the Proposed Effluent Limitations Table for permitted quantities.

Procedures for Public Comment: The Notice of the Division's intent to issue a permit authorizing the facility to discharge to the surface water of the State of Nevada subject to the conditions contained within the permit, is being sent to the **Elko Daily Free Press** and the **Reno Gazette-Journal** for publication. The notice is being mailed to interested persons on our mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of 30 days following the date of publication of the public notice. All comments must be received by 5:00 PM April 16, 2001. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined to be appropriate. All public hearings must be conducted to accordance with NAC 445A.238. The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Proposed Effluent Limitations:

TABLE I.1

PARAMETERS	**EFFLUENT DISCHARGE LIMITATIONS**		**MONITORING REQUIREMENTS**		
	30-Day Average	**Daily Maximum**	**Sample Location(s)** [4]	**Measurement Frequency**	**Sample Type**
Flow	---	5.90 MGD	c	Monthly[1]	Discrete
	---	0.15 MGD	d		
	---	3.50 MGD	h		
Total Flow	---	9.55 MGD	c + d + h	Monthly	Calculation
Total Phosphates	0.06 mg/L	0.3 mg/L	e, i	Monthly	Discrete
	Monitor and Report		b, g	Quarterly	
			a[2], f	Annually[3]	
Biochemical Oxygen Demand (5-day, 20°C)	4.00 mg/L	5.00 mg/L	e, i	Monthly	Discrete
	Monitor and Report		b, g	Quarterly	
			a[2], f	Annually[3]	
Total Suspended Solids	10.00 mg/L	15.00 mg/L	e, i	Monthly	Discrete
	Monitor and Report		b, g	Quarterly	
Total Dissolved Solids (TDS)	TDS_e 1.33 TDS_b TDS_i 1.33 TDS_g or 500 mg/L, whichever is less		b, e, g, i	Monthly	Discrete
	Monitor and Report		a[2], f	Annually[3]	
pH	6.5 pH 8.5 S.U.		e, i	Monthly[1]	Discrete

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS		
	30-Day Average	Daily Maximum	Sample Location(s) [4]	Measurement Frequency	Sample Type
	Monitor and Report		a[2], b, f, g		
Un-ionized Ammonia (NH_3-N)	0.02 mg/L	0.03 mg/L	e, i	Monthly	Calculate
	Monitor and Report		b, g	Quarterly	
			a[2], f	Annually[3]	
Ammonia Nitrogen (NH_4-N)	Monitor and Report		e, i	Monthly	Discrete
			b, g	Quarterly	
			a[2], f	Annually[3]	
Temperature	$T_{e, i}$ 20°C and T_e T_b T_i T_g		e, i	Monthly[1]	Discrete
	Monitor and Report		a[2], b, f, g		
Dissolved Oxygen	6.0 mg/L		e, i	Monthly[1]	Discrete
	Monitor and Report		a[2], b, f, g		

Notes: (1) Field measurement.
(2) Samples from location "a" are a composite of approximately ⅔ South Spring water and ⅓ North Spring water.
(3) Sampled in the fourth quarter and reported in the annual report.
(4) See permit for list of sample locations a through g.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the schedule of compliance.

a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.

b. The Permittee shall submit a report in accordance with permit condition I.B.1.c. within 14 days of a compliance date detailing compliance or noncompliance with that date.

c. The Permittee shall submit a revised O & M Manual within sixty (60) days of the effective date of this permit.

Special Conditions: None

Rationale for Permit Requirements: According to the existing permit monitoring requirements, Outfall 001, the flow-through discharge, and Outfall 002, the cleaning water discharge, must be discretely sampled. Since these outfalls discharge to the oxbow/mixing pond, the compliance monitoring points for the main hatchery complex have been combined and relocated to the collection ditch five meters downstream of the oxbow/mixing pond. Monitoring of the north canopy area is not required by the existing hatchery permit. The compliance point for this discharge has been established as the outlet of the effluent treatment pond.

Monthly compliance monitoring has been maintained for the main hatchery complex and incorporated into the permit for the north canopy area. Due to the consistency of the spring water quality data, the frequency of laboratory

analyses of the inflow water has been reduced to annually for the main hatchery complex. Although not monitored as part of the existing permit, annual laboratory characterization of Bressman Spring has been determined to be adequate. Quarterly laboratory analyses of the collection ditch water has been added to the permit; this data was not collected previously. The frequency of monitoring that can be performed with field measurement devices, flow, pH, temperature and dissolved oxygen, has not been reduced.

Flow - The existing permit authorizes a discharge of 3.0 MGD, daily maximum, from Outfall 001 and 0.15 MGD, daily maximum, from Outfall 002 that will be designated as Outfall 002 through Outfall 004 in the reissued permit. Outfall 005 was not included in the existing permit.

The Outfall 001 discharge is usually well below the permitted volume, but the hatchery has no method to control the volume of inflow water. All water from the North and South Springs flows to the hatchery, as well as the volume of Nino Spring flow that exceeds domestic consumption. Therefore, the flow-through daily maximum has been increased to 5.90 MGD, slightly above the maximum historic flow.

At current and planned production levels, the main hatchery complex cleaning discharge will not exceed the 0.15 MGD daily maximum of the existing permit.

The north canopy facility flow has not been closely monitored. The winter 2000/2001 flow has averaged approximately 1.73 MGD. To account for seasonal variation a daily maximum flow of 3.50 MGD for Bressman Spring has been added to the permit. The north canopy area also has no method to control the volume of inflow water.

Total Phosphates - Per NAC 445A.125, the Class B water quality standards require that the total phosphates concentration must not exceed 0.3 mg/L. The previous permit had a 30-day average discharge limitation of 0.06 mg/L for the flow-through discharge; and a 30-day average discharge limitation of 0.3 mg/L and a daily maximum of 0.60 mg/L for the cleaning water discharge. A daily maximum of 0.3 mg/L and a 30-day average of 0.06 mg/L have been incorporated into the renewal. The DMR records demonstrate that the average total phosphates concentration of the two main hatchery complex permitted discharges have been within the permit limitations.

BOD (5-day, 20° C) - No five-day biochemical oxygen demand (BOD_5) standard exists for Class B waters but a dissolved oxygen (DO) standard of 6.0 mg/L does exist. To maintain this level of DO, the BOD_5 standard was established at the 4.00 mg/L 30-day average and 5.00 mg/L daily maximum levels in a previous National Pollutant Discharge Elimination System Permit issued for the main hatchery complex flow-through discharge. The existing permit has limitations of 15 mg/L and 30 mg/L as the 30-day average and the daily maximum, respectively, for the main hatchery complex cleaning discharge. The DMR records demonstrate that the average BOD_5 concentration of the discharge is approximately 1.5 mg/L from Outfall 001 and 4.0 mg/L from Outfall 002. With the relocated compliance point, the flow-through discharge limitations have been adopted for this point and the north canopy compliance point.

Total Suspended Solids - The Class B water quality standards, NAC 445A.125, do not include a total suspended solids (TSS) concentration standard. The proposed limits of 10.00 mg/L and 15.00 mg/L as a 30-day average and daily maximum respectively were established in a previous permit for the main hatchery complex cleaning water and have been maintained. The DMR records demonstrate that the TSS concentration of the main hatchery complex discharges has been within the permit limitations.

Total Dissolved Solids - Per NAC 445A.125, the Class B water quality standards require that the total dissolved solids (TDS) concentration must not exceed 500 mg/L or one third above that characteristic of natural conditions, whichever is less. The DMR records demonstrate that main hatchery complex discharges have consistently met the 500 mg/L permit limitation. Without collection ditch TDS data, it is not possible to determine whether the less than one third above that characteristic of natural conditions limitation was met.

pH - Per NAC 445A.125, the Class B water quality standards require that the pH range must be from 6.5 to 8.5 S.U. The DMR records demonstrate that the average pH of the main hatchery complex discharges is approximately 8.0 S.U., within the proposed limitation range.

Un-ionized Ammonia and Ammonia Nitrogen - Per NAC 445A.125, the Class B water quality standards do not include un-ionized ammonia (NH_3-N) and ammonia nitrogen (NH_4-N) concentration standards. The proposed un-ionized ammonia limits of 0.02 mg/L and 0.03 mg/L as a 30-day average and daily maximum, respectively, are the

same as the limits in the existing permit. The DMR records demonstrate that both the flow-through and cleaning discharges of the main hatchery complex have consistently met this permit limitation.

Temperature - Per NAC 445A.125, the Class B water quality standards require that the temperature not exceed 20° C for waters with trout and that there be no temperature increase above natural receiving water temperature. The DMR records demonstrate that both main hatchery complex discharges have consistently met these permit limitations.

Dissolved Oxygen - Per NAC 445A.125, the Class B water quality standards require that the DO concentration be greater than or equal to 6.0 mg/L for waters with trout. DO monitoring was not required by the previous permit.

Proposed Determination: The Division has made the tentative determination to reissue the proposed permit for a five-year period.

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